



DEPARTMENT OF REGULATORY AND ECONOMIC RESOURCES (RER)
BOARD AND CODE ADMINISTRATION DIVISION

NOTICE OF ACCEPTANCE (NOA)

MIAMI-DADE COUNTY
PRODUCT CONTROL SECTION
11805 SW 26 Street, Room 208
T (786) 315-2590 F (786) 315-2599
www.miamidade.gov/economy

Titan Glass & Aluminum, LLC
450 West 27th Street
Hialeah, FL 33010

SCOPE:

This NOA is being issued under the applicable rules and regulations governing the use of construction materials. The documentation submitted has been reviewed and accepted by Miami-Dade County RER - Product Control Section to be used in Miami Dade County and other areas where allowed by the Authority Having Jurisdiction (AHJ).

This NOA shall not be valid after the expiration date stated below. The Miami-Dade County Product Control Section (In Miami Dade County) and/or the AHJ (in areas other than Miami Dade County) reserve the right to have this product or material tested for quality assurance purposes. If this product or material fails to perform in the accepted manner, the manufacturer will incur the expense of such testing and the AHJ may immediately revoke, modify, or suspend the use of such product or material within their jurisdiction. RER reserves the right to revoke this acceptance, if it is determined by Miami-Dade County Product Control Section that this product or material fails to meet the requirements of the applicable building code.

This product is approved as described herein, and has been designed to comply with the Florida Building Code, including the High Velocity Hurricane Zone.

DESCRIPTION: Series "TSH-2750" Aluminum Single Hung Window – L.M.I.

APPROVAL DOCUMENT: Drawing No. AD10-05, titled "TSH-2750 Aluminum Single Hung Window (LMI)", sheets 1 through 6 of 6, dated 11/14/12, with revision #2 dated 05/01/14, prepared by MCY Engineering, Inc., signed and sealed by Yiping Wang, P.E., bearing the Miami-Dade County Product Control Revision stamp with the Notice of Acceptance number and expiration date by the Miami-Dade County Product Control Section.

MISSILE IMPACT RATING: Large and Small Missile Impact Resistant

LABELING: Each unit shall bear a permanent label with the manufacturer's name or logo, city, state, model/series, and following statement: "Miami-Dade County Product Control Approved", unless otherwise noted herein.

RENEWAL of this NOA shall be considered after a renewal application has been filed and there has been no change in the applicable building code negatively affecting the performance of this product.

TERMINATION of this NOA will occur after the expiration date or if there has been a revision or change in the materials, use, and/or manufacture of the product or process. Misuse of this NOA as an endorsement of any product, for sales, advertising or any other purposes shall automatically terminate this NOA. Failure to comply with any section of this NOA shall be cause for termination and removal of NOA.

ADVERTISEMENT: The NOA number preceded by the words Miami-Dade County, Florida, and followed by the expiration date may be displayed in advertising literature. If any portion of the NOA is displayed, then it shall be done in its entirety.

INSPECTION: A copy of this entire NOA shall be provided to the user by the manufacturer or its distributors and shall be available for inspection at the job site at the request of the Building Official.

This NOA revises and renews NOA# 12-1128.02 and consists of this page 1 and evidence pages E-1 and E-2, as well as approval document mentioned above.

The submitted documentation was reviewed by Manuel Perez, P.E.



Handwritten signature and date: 7/2/14

NOA No. 14-0515.02
Expiration Date: June 24, 2019
Approval Date: July 10, 2014
Page 1

Titan Glass & Aluminum, LLC

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

A. DRAWINGS

1. Manufacturer's die drawings and sections.
2. Drawing No **AD10-05**, titled "TSH-2750 Aluminum Single Hung Window (LMI)", sheets 1 through 6 of 6, dated 11/14/12, with revision #2 dated 05/01/14, prepared by MCY Engineering, Inc., signed and sealed by Yiping Wang, P.E.

B. TESTS

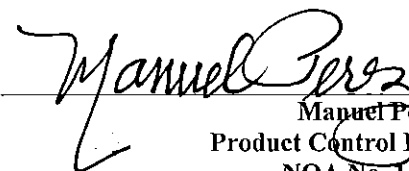
1. Test reports on: 1) Uniform Static Air Pressure Test, Loading per FBC TAS 202-94
2) Large Missile Impact Test per FBC, TAS 201-94
3) Cyclic Wind Pressure Loading per FBC, TAS 203-94
along with marked-up drawings and installation diagram of a series FIW 2009-80 aluminum single hung window, prepared by Fenestration Testing Laboratory, Inc., Test Report No. **FTL-6057**, dated 10/05/09, signed and sealed by Julio E. Gonzalez, P.E.
(Submitted under NOA# 10-0422.06)
2. Test reports on: 1) Air Infiltration Test, per FBC, TAS 202-94
2) Uniform Static Air Pressure Test, Loading per FBC TAS 202-94
3) Water Resistance Test, per FBC, TAS 202-94
4) Large Missile Impact Test per FBC, TAS 201-94
5) Cyclic Wind Pressure Loading per FBC, TAS 203-94
6) Forced Entry Test, per FBC 2411 3.2.1, TAS 202-94
along with marked-up drawings and installation diagram of a series FIW 2008 aluminum single hung window, prepared by Fenestration Testing Laboratory, Inc., Test Report No. **FTL-5743**, dated 12/30/08, signed and sealed by Michael R. Wenzel, P.E.
(Submitted under NOA# 09-0413.06)

C. CALCULATIONS

1. Anchor verification calculations and structural analysis, complying with FBC-2007, prepared by MCY Engineering, Inc., dated 04/07/10, and updated to **FBC 5th Edition (2014)** on 05/12/14, signed and sealed by Yiping Wang, P.E.
(Submitted partially under NOA# 10-0422.06)
2. Glazing complies with **ASTM E1300-04**.

D. QUALITY ASSURANCE

1. Miami-Dade Department of Regulatory and Economic Resources (RER)


Manuel Perez, P.E.
Product Control Examiner
NOA No. 14-0515.02
Expiration Date: June 24, 2019
Approval Date: July 10, 2014

Titan Glass & Aluminum, LLC

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

E. MATERIAL CERTIFICATIONS


1. Notice of Acceptance No. **11-0624.02** issued to **E.I. DuPont DeNemours & Co., Inc.** for their "**DuPont SentryGlas® Interlayer**" dated 08/25/11, expiring on 01/14/17.
2. Notice of Acceptance No. **13-0129.27** issued to **E.I. DuPont DeNemours & Co., Inc.** for their "**DuPont Butacite® PVB Interlayer**" dated 04/11/13, expiring on 12/11/16.

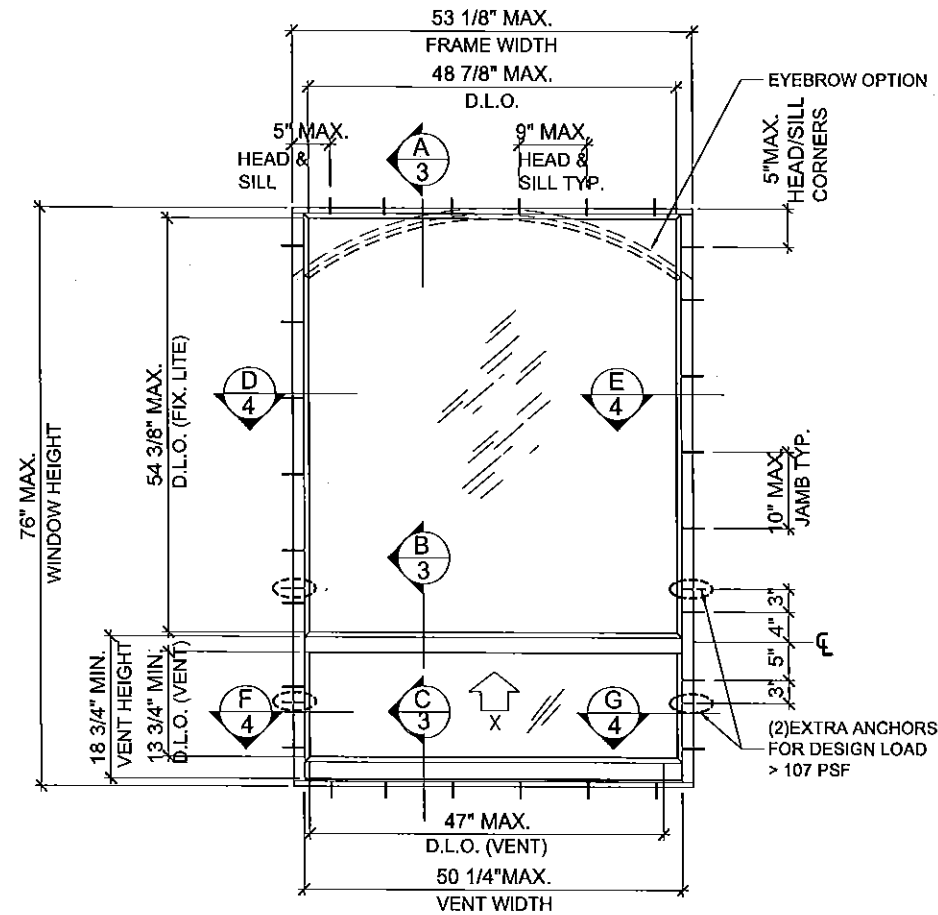
F. STATEMENTS

1. Statement letter of conformance, complying with **FBC-5th Edition (2014)**, and of no financial interest, dated May 12, 2014, issued by MCY Engineering, Inc., signed and sealed by Yiping Wang, P.E.
2. Laboratory compliance letter for Test Report No. **FTL-6057**, issued by Fenestration Testing Laboratory, Inc., dated October 05, 2009, signed and sealed by Julio E. Gonzalez, P.E.
(Submitted under NOA# 10-0422.06)
3. Laboratory compliance letter for Test Report No. **FTL-5743**, issued by Fenestration Testing Laboratory, Inc., dated December 30, 2008, signed and sealed by Michael R. Wenzel, P.E.
(Submitted under NOA# 09-0413.06)

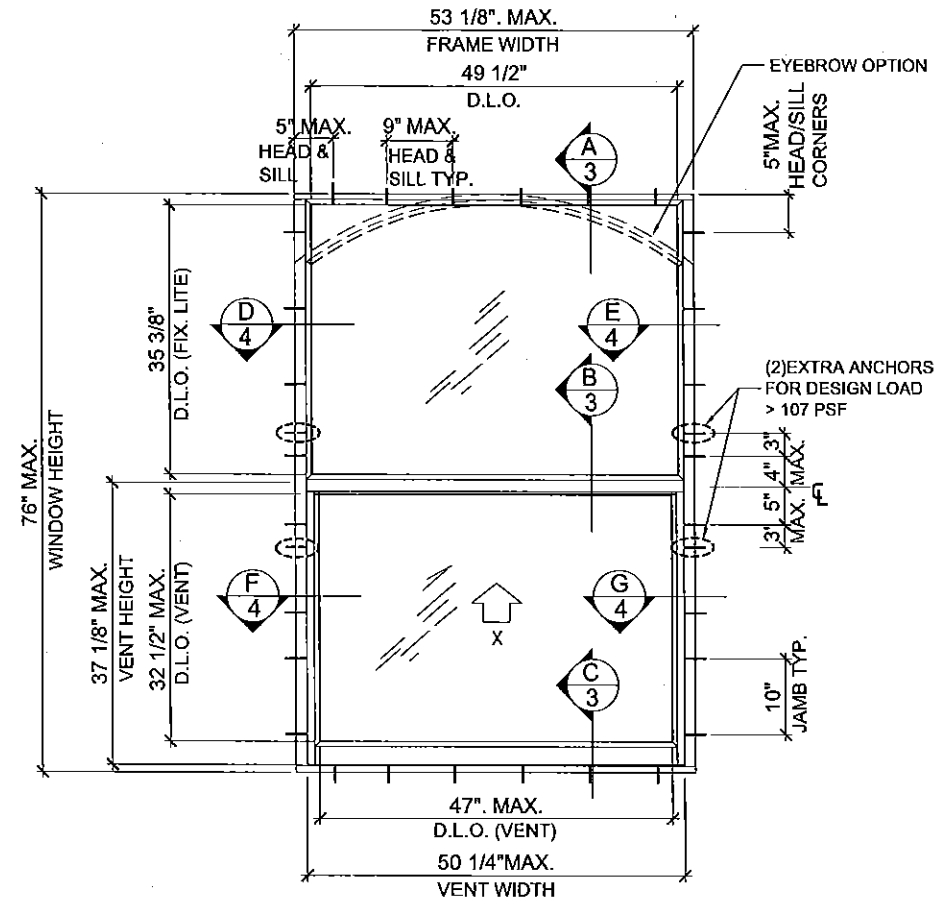
G. OTHERS

1. Notice of Acceptance No. **12-1128.02**, issued to Titan Glass & Aluminum, LLC for their Series "TSH-2750" Aluminum Single Hung Window – L.M.I.", approved on 12/27/12 and expiring on 06/24/14.

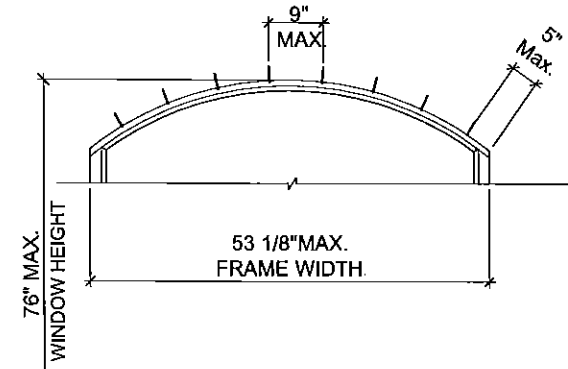

Manuel Perez, P.E.
Product Control Examiner
NOA No. 14-0515.02
Expiration Date: June 24, 2019
Approval Date: July 10, 2014



TYPICAL ELEVATION



TYPICAL ELEVATION



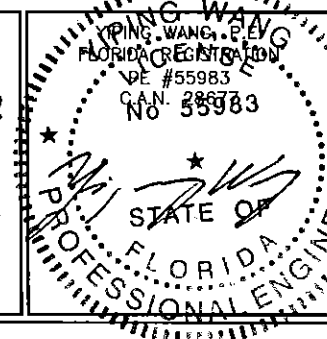
EYEBROW OPTION
(FOR ORIAL OR EQUAL SASH)

GENERAL NOTES:

- THIS PRODUCT HAS BEEN DESIGNED AND TESTED TO COMPLY WITH THE REQUIREMENTS OF THE FLORIDA BUILDING CODE 2010/2014 EDITION INCLUDING HIGH VELOCITY HURRICANE ZONE (HVHZ).
- WINDOWS RATED FOR LARGE MISSILE IMPACT AND DO NOT REQUIRE SHUTTERS.
- THESE WINDOWS ARE APPROVED FOR AIR AND WATER INFILTRATION.
- ANCHORS SHALL BE AS LISTED, SPACED AS SHOWN ON DETAILS. ANCHORS EMBEDMENT TO BASE MATERIAL SHALL BE BEYOND WALL DRESSING OR STUCCO.
- ANCHORING OR LOADING CONDITIONS NOT SHOWN IN THESE DETAILS ARE NOT PART OF THIS APPROVAL.
- WOOD BUCKS BY OTHERS MUST BE SOUTHERN PINE, G = 0.55 AND MUST BE ANCHORED PROPERLY TO TRANSFER LOADS TO THE STRUCTURE.

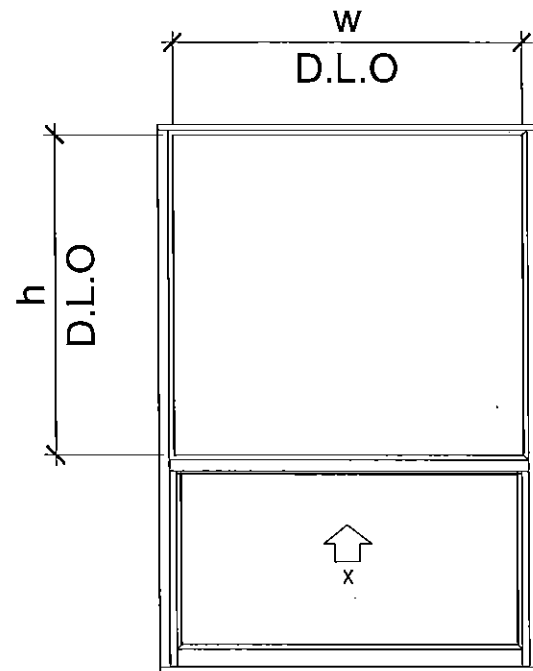
- A LOAD DURATION FACTOR IN ALLOWABLE STRESS IS USED IN DESIGN OF ANCHORS INTO WOOD ONLY.
- PROVIDE 1/4\" MAX. LOAD BEARING SHIM SPACE (TYP.).
- MATERIALS INCLUDING BUT NOT LIMITED TO STEEL/METAL SCREWS THAT COME INTO CONTACT WITH OTHER DISSIMILAR MATERIALS SHALL MEET THE REQUIREMENTS OF THE 2010/2014 FLORIDA BUILDING CODE SECTION AS APPLICABLE.
- METAL STRUCTURES BY OTHERS MUST SUPPORT LOADS IMPOSED BY WINDOW SYSTEM AND TRANSFER THEM TO THE BUILDING STRUCTURE.
- DESIGN LOAD OBTAINED FROM ASCE 7-10, MULTIPLY 0.6 SHALL BE LESS THAN OR EQUAL TO MAX. DESIGN LOAD IN THIS DOCUMENT.

PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No 14-0515.02
Expiration Date June 24, 2019
By *Manuel Perez*
Miami Dade Product Control



TSH-2750 ALUMINUM SINGLE HUNG WINDOW (LMI)	
TITAN GLASS & ALUMINUM, LLC. 450 WEST 27th STREET HIALEAH, FL 33010 P: (305) 888 - 0911 F: (305) 671 - 3840	
DATE	11/14/12
SCALE	AS SHOWN
DRAWN	W.L.
PROJECT	10-012
DRAWING NO.	AD10-05
1 OF 6	

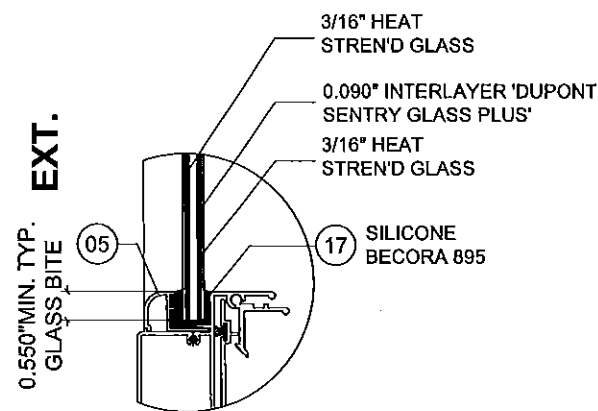
MCY ENGINEERING, INC. GLAZING CONSULTANTS	
8501 SW 124 AVE. STE. 205A P: 305.271.0117 MIAMI, FL 33183 F: 305.921.4786	
www.MCYEngineering.com MCY.Engineering@Att.net	
NO. DATE	DESCRIPTION
3/15/12	UPDATE TO 2010 FBC
5/1/14	UPDATE TO 2014 FBC



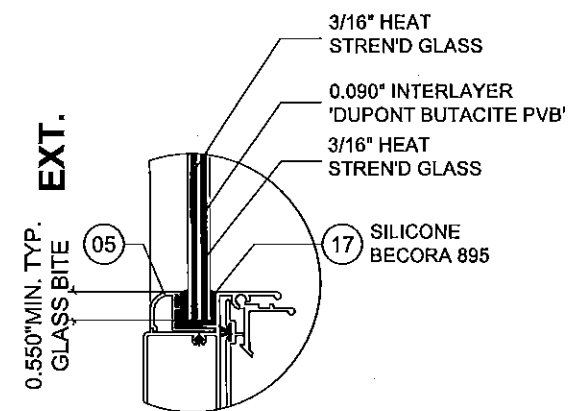
SINGLE HUNG WINDOW SCHEDULE

	GLASS TYPE A	GLASS TYPE B	GLASS TYPE C
MAXIMUM DESIGN LOAD	+110.0 PSF -150.0 PSF	+110.0 PSF -150.0 PSF	+80.0 PSF -80.0 PSF
MAX. FIXED LITE GLASS AREA (w'h)	2640 IN ²	1729 IN ²	2640 IN ²

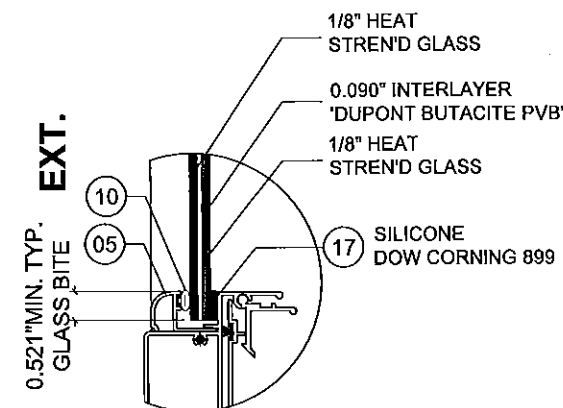
NOTE:
SCHEDULE FOR UNEQUAL SASH HEIGHT ORIEL AND EQUAL SASH HEIGHT SINGLE HUNG WINDOW.
ALSO FOR RECTANGULAR OR EYEBROW.



GLASS TYPE "A"



GLASS TYPE "B"



GLASS TYPE "C"

GLAZING OPTIONS

NOTE:
GLASS CAPACITIES ARE BASED ON ASTM E1300-02/04 (3 SEC. GUSTS)

GLAZING COMPLY WITH ASTM E1300-04

REVISIONS	NO.	DATE	DESCRIPTION
	1	3/15/12	UPDATE TO 2010 FBC
	2	5/1/14	UPDATE TO 2014 FBC

MCY ENGINEERING, INC.
GLAZING CONSULTANTS

MCY

8501 SW 124 AVE. STE. 205A P: 305.271.0117
MIAMI, FL 33163 F: 305.921.4786

www.MCYEngineering.com MCY.Engineering@att.net

TSH-2750 ALUMINUM SINGLE HUNG WINDOW (LMI)

TITAN GLASS & ALUMINUM, LLC.
450 WEST 27th STREET
HIALEAH, FL 33010
P: (305) 888-0911 F: (305) 671-3840

PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No. 14-0515-02
Expiration Date June 24, 2019

By *Manuel Perez*
Miami Dade Product Control

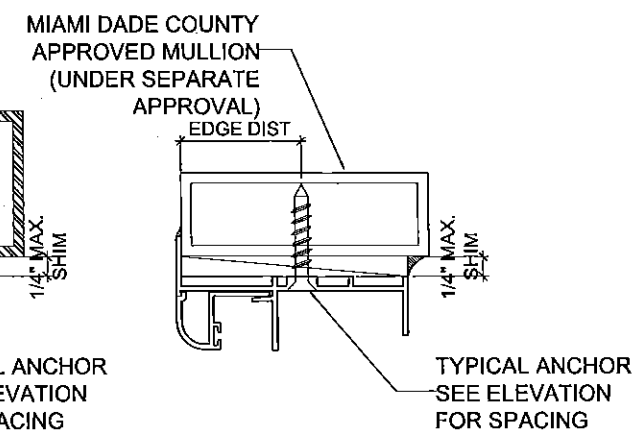
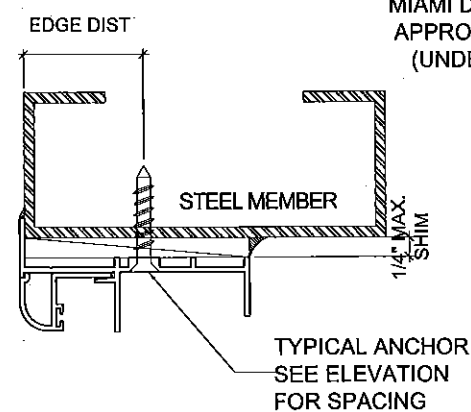
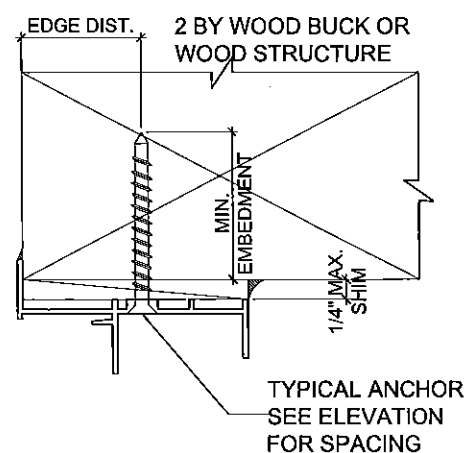
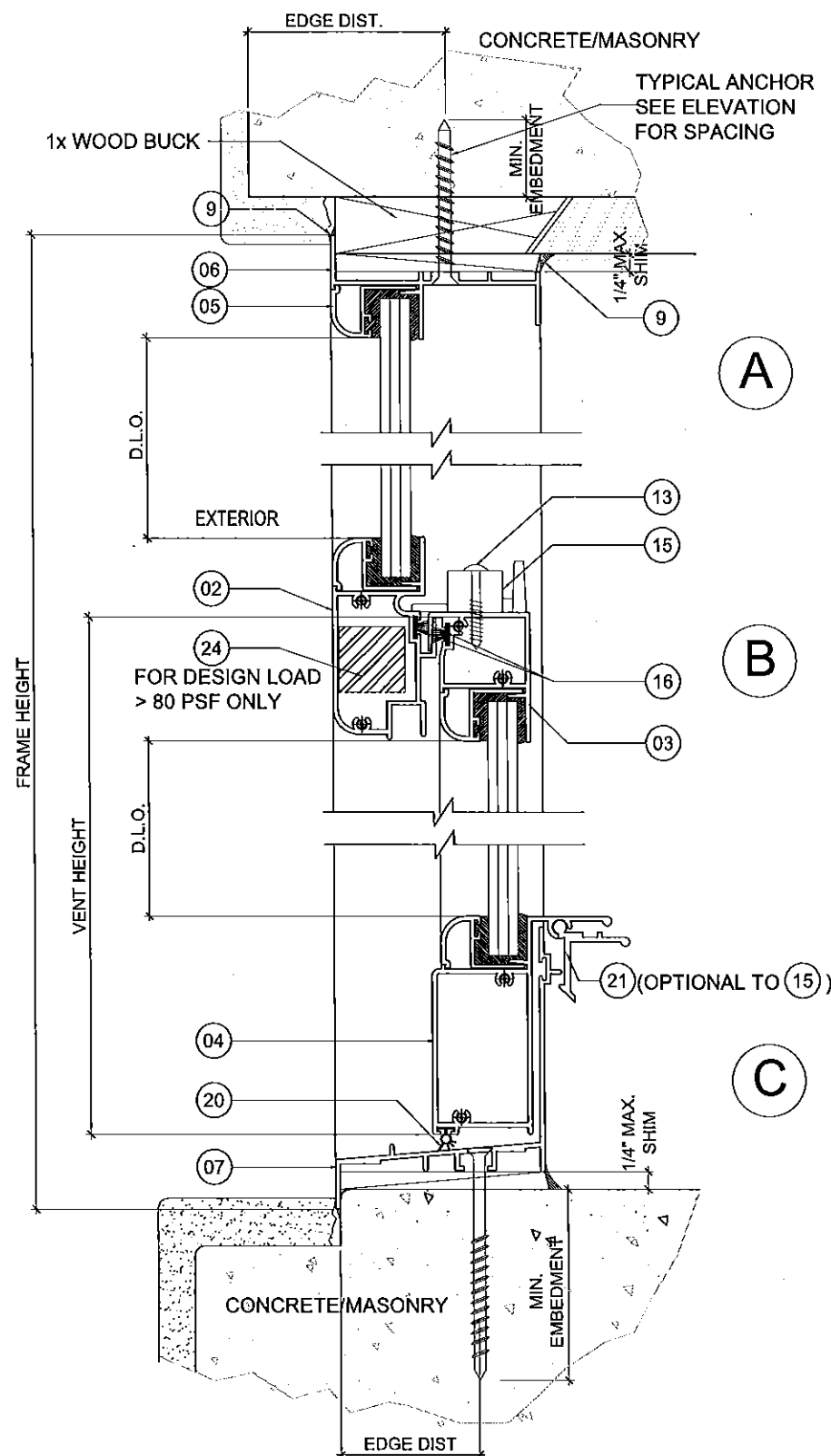
MIAMI DADE COUNTY

MAY 01 2014

FLORIDA REGISTERED PROFESSIONAL ENGINEER
PC #50083
C.A.N. 28674
No 55983

STATE OF FLORIDA

DATE	11/14/12
SCALE	AS SHOWN
DRAWN	W.L.
PROJECT	10-012
DRAWING NO.	AD10-05
	2 OF 6



TYPICAL ANCHORS: SEE ELEV. FOR SPACING

TYPE 'A' 1/4" DIA. HILTI KWIK-CON II (Fy=157 KSI, Fu=163 KSI)

- INTO 2BY WOOD BUCKS OR WOOD STRUCTURES
1-1/2" MIN. WOOD PENETRATION
- THRU 1BY WOOD BUCKS INTO MASONRY OR CONC.
1-5/8" MIN. EMBED INTO MASONRY OR CONC.
- DIRECTLY INTO MASONRY OR CONCRETE
1-5/8" MIN. EMBED INTO MASONRY OR CONCRETE

TYPE 'B' 1/4" DIA. TEKS OR SELF DRILLING SCREWS (Fy=92 KSI, Fu=120 KSI)

- INTO METAL STRUCTURES
STEEL : 12 GA. MIN. (Fy = 36 KSI MIN.)
ALUMINUM : 1/8" THK. MIN. (6063-T5 MIN.)
(STEEL IN CONTACT WITH ALUMINUM TO BE PLATED OR PAINTED)

TYPICAL EDGE DISTANCE:

INTO CONCRETE AND MASONRY:
2" MIN. AT JAMB & 1-1/2" AT HEAD & SILL
INTO WOOD STRUCTURE = 1" MIN.
INTO METAL STRUCTURE = 3/4" MIN.

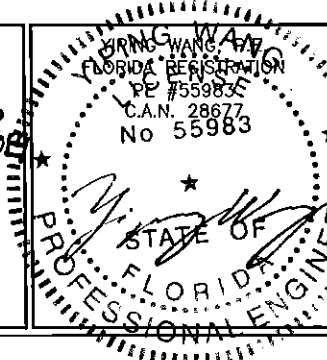
SEALANT:

ALL FRAME CORNERS, VENT CORNERS AND
EACH END OF THE FIXED MEETING RAILS

WEEP HOLES:

1/4" LONG WEEP HOLES NOTCH ONE AT EACH END.

PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No. 14-0515-02
Expiration Date June 24, 2018
By *Manuel Perez*
Miami Dade Product Control



NO.	DATE	DESCRIPTION
1	3/15/12	UPDATE TO 2010 FBC
2	5/1/14	UPDATE TO 2014 FBC

MCY ENGINEERING, INC.
GLAZING CONSULTANTS

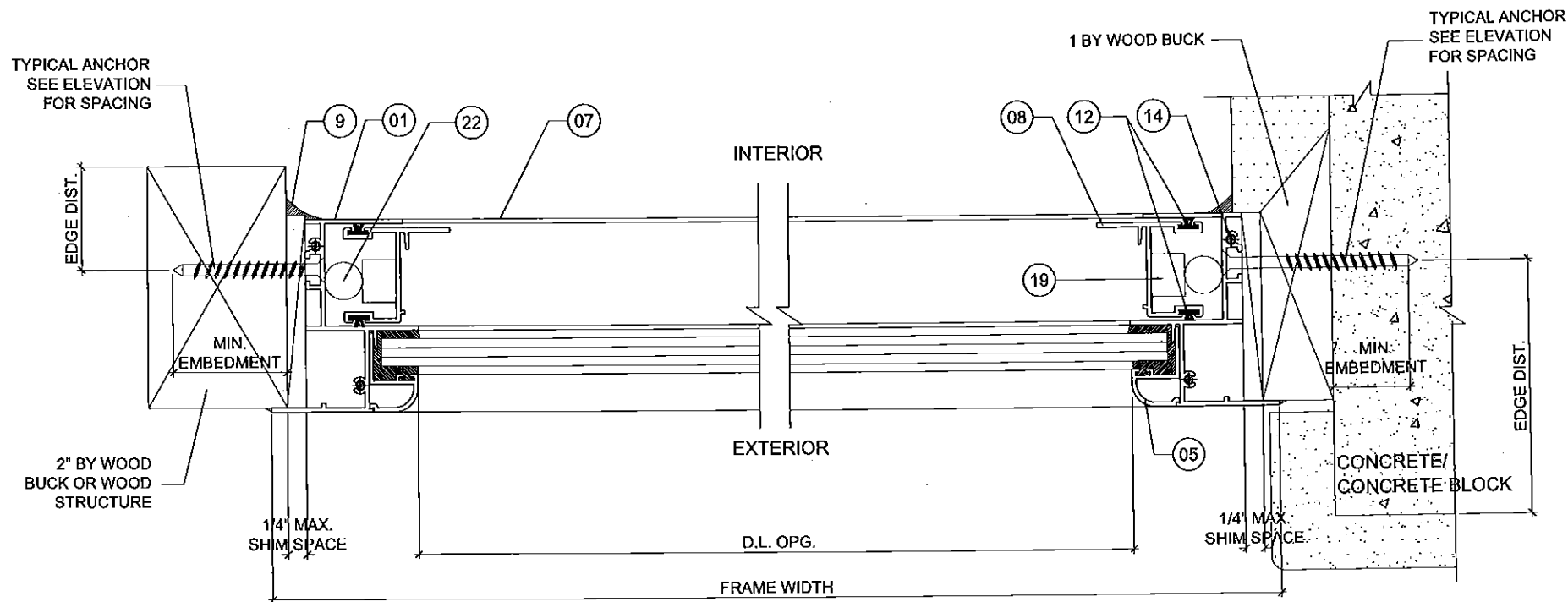
MCY

8501 SW 124 AVE. STE. 205A P: 305.271.0117
MIAMI, FL 33183 F: 305.921.4786
www.MCYEngineering.com MCY.Engineering@att.net

TSH-2750 ALUMINUM SINGLE HUNG WINDOW (LMI)

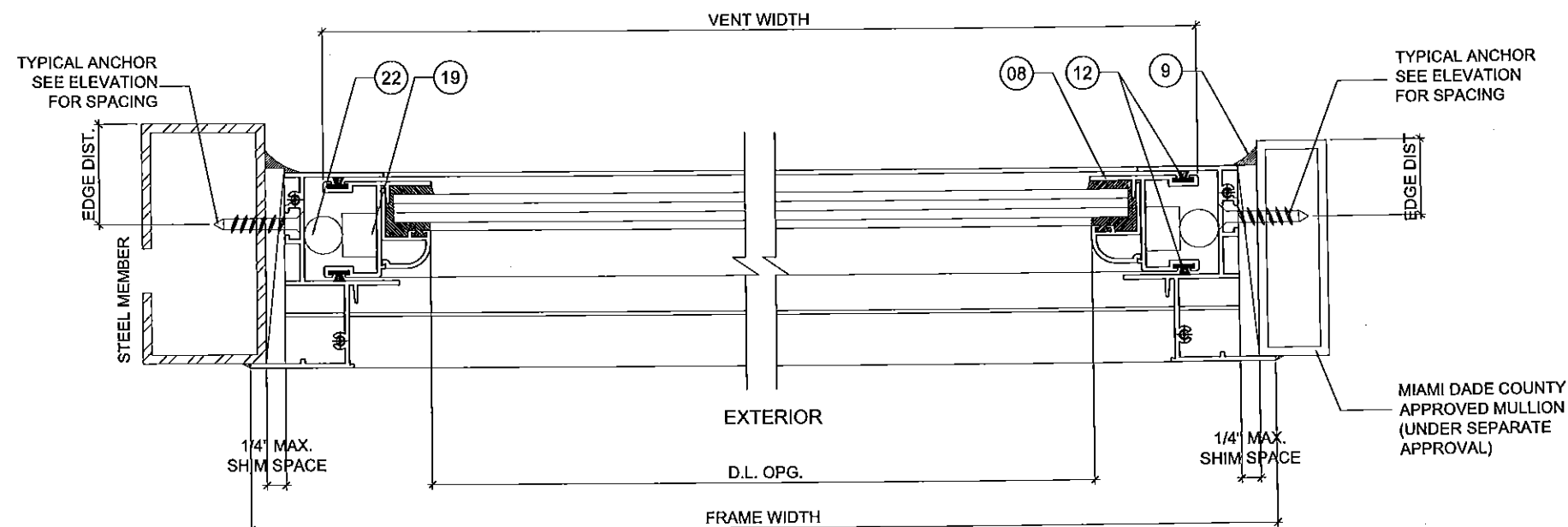
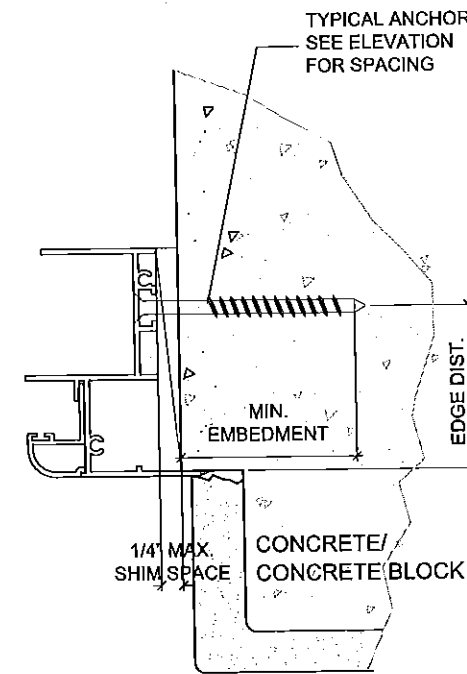
TITAN GLASS & ALUMINUM, LLC.
450 WEST 27th STREET
HIALEAH, FL 33010
P: (305) 888-0911 F: (305) 671-3840

DATE	11/14/12
SCALE	AS SHOWN
DRAWN	W.L.
PROJECT	10-012
DRAWING NO.	AD10-05
	3 OF 6



D

E

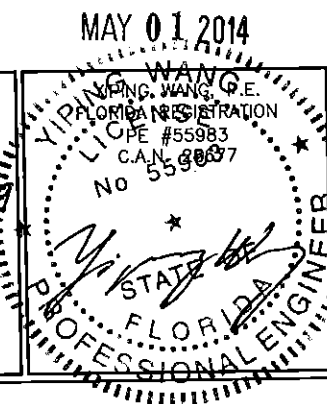


F

G

PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No 14-0515-02
Expiration Date June 24, 2019
By *Manuel Perez*
Miami Dade Product Control

MIAMI DADE COUNTY



DATE	11/14/12
SCALE	AS SHOWN
DRAWN	W.L.
PROJECT	10-012

DRAWING NO.
AD10-05

4 OF 6

TSH-2750 ALUMINUM SINGLE HUNG WINDOW (LMI)

TITAN GLASS & ALUMINUM, LLC.
450 WEST 27th STREET
HIALEAH, FL 33010

P: (305) 888-0911 F: (305) 671-8840

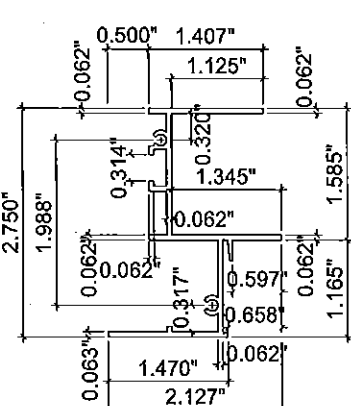
MCY ENGINEERING, INC.
GLAZING CONSULTANTS

8501 SW 124 AVE. STE. 205A P: 305.271.0117
MIAMI, FL 33183 F: 305.921.4786

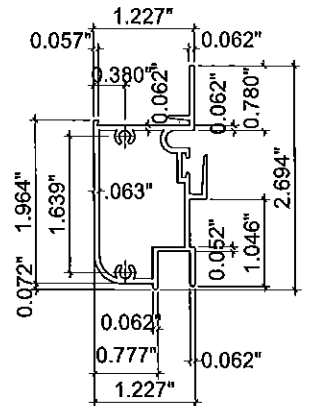
www.MCYEngineering.com MCY.Engineering@Att.net

REVISIONS

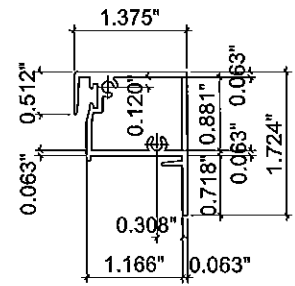
NO	DATE	DESCRIPTION
1	3/15/12	UPDATE TO 2010 FBC
2	5/1/14	UPDATE TO 2014 FBC



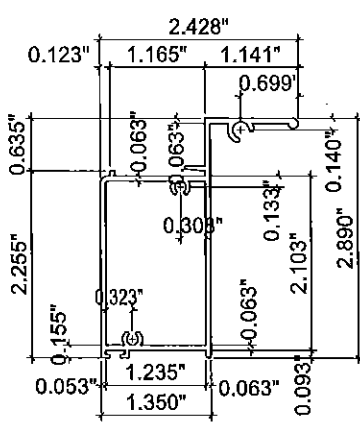
01 FRAME JAMB
6063-T6



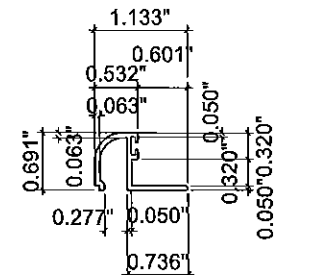
02 FIXED MEETING RAIL
6063-T6



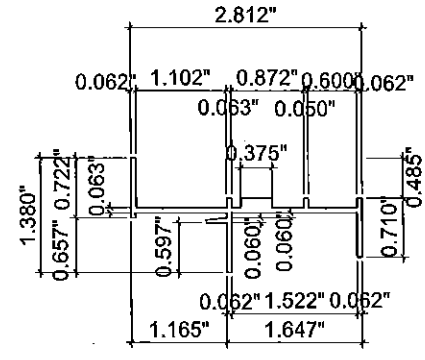
03 VENT MEETING RAIL
6063-T6



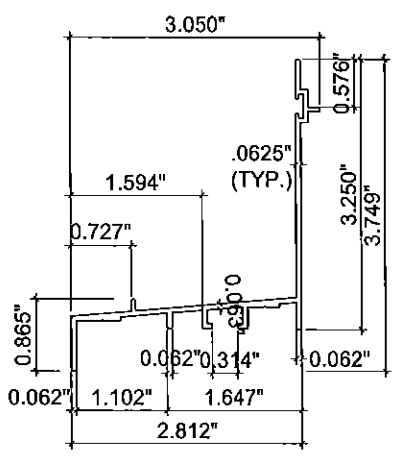
04 VENT BOTTOM RAIL
6063-T6



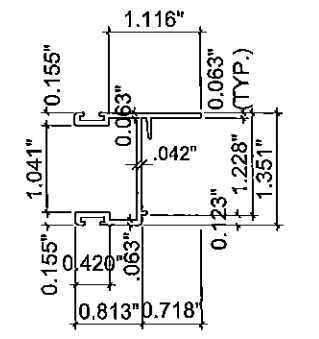
05 GLAZING BEAD
6063-T6



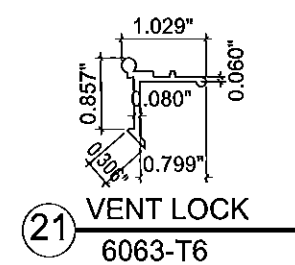
06 FRAME HEAD
6063-T6



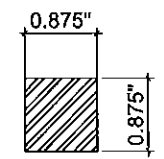
07 FRAME SILL
6063-T6



08 VENT STILE
6063-T6



21 VENT LOCK
6063-T6

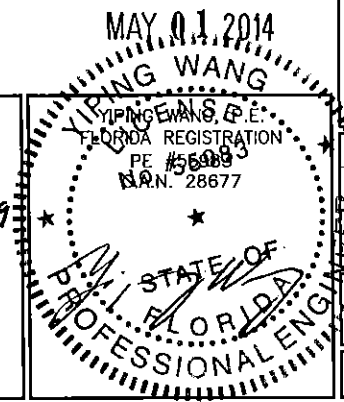


24 STEEL INSERT

BILL OF MATERIAL

ITEM #	PART	DESCRIPTION	MATERIAL
01	FSP 015	FRAME JAMB	6063-T6
02	FSP 041	FIXED MEETING RAIL	6063-T6
03	FSP 018	VENT MEETING RAIL	6063-T6
04	FSP 042	VENT BOTTOM RAIL	6063-T6
05	FSP 017	GLAZING BEAD	6063-T6
06	FSP 014	FRAME HEAD	6063-T6
07	FSP 040	FRAME SILL	6063-T6
08	FSP 016	VENT STILE	6063-T6
9	SILICONE	SEALANT, AT FRAME CORNERS, VENT CORNERS AND EACH END OF THE FIXED MEETING RAIL.	NON STRUCTURAL SILICONE
10		VINYL BULB	-
11	FASTENER	#8 X 1 1/2" PH SMS (SS) VENT CORNER FASTENERS	-
12		WEATHER STRIP	-
13	FASTENER	#8 X 5/8" PH SMS (SS) LATCH LOCK FASTENER	-
14	FASTENER	#8 X 1 1/2" PH SMS (SS) FRAME CORNER FASTENERS	-
15		LATCH LOCK	-
16		WEATHER STRIP	-
17	SILICONE	PECORA 896	STRUCTURAL SILICONE
18	NYLON GUIDES	(4) NYLON GUIDES LOCATED AT 3 1/8" AND 36 3/4" FROM BOTTOM OF VENT STILE USING (1) #6X3/8" F.H. S.M.S.	-
19	NYLON GUIDES	(2) NYLON GUIDES LOCATED AT EACH END OF VENT MEETING RAIL USING (2) #8X1 1/2" P.H. S.M.S.	-
20		VENT VINYL BULB	-
21	FSP 021	VENT LOCK	-
22		BALANCE	-
23	SURFACE MOUNT METALLIC CLIPS	(2) CLIPS AT EACH VENT BOTTOM RAIL CONNECTED USING (2) #8X5/8" F.H. S.M.S.	-
24		7/8" X 7/8" CONT. STEEL BAR, ZINC PLATED USED WHEN DESIGN LOAD > 80 PSF	ASTM A-36

PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No 14-0515-02
Expiration Date June 24, 2019
By *Manuel Perez*
Miami Dade Product Control



REVISIONS

NO	DATE	DESCRIPTION
1	3/15/12	UPDATE TO 2010 FBC
2	5/1/14	UPDATE TO 2014 FBC

MCY

MCY ENGINEERING, INC.
GLAZING CONSULTANTS
8501 SW 124 AVE. STE. 205A
MIAMI, FL 33163
P: 305.271.0117
F: 305.921.4786
www.MCYEngineering.com
MCY.Engineering@att.net

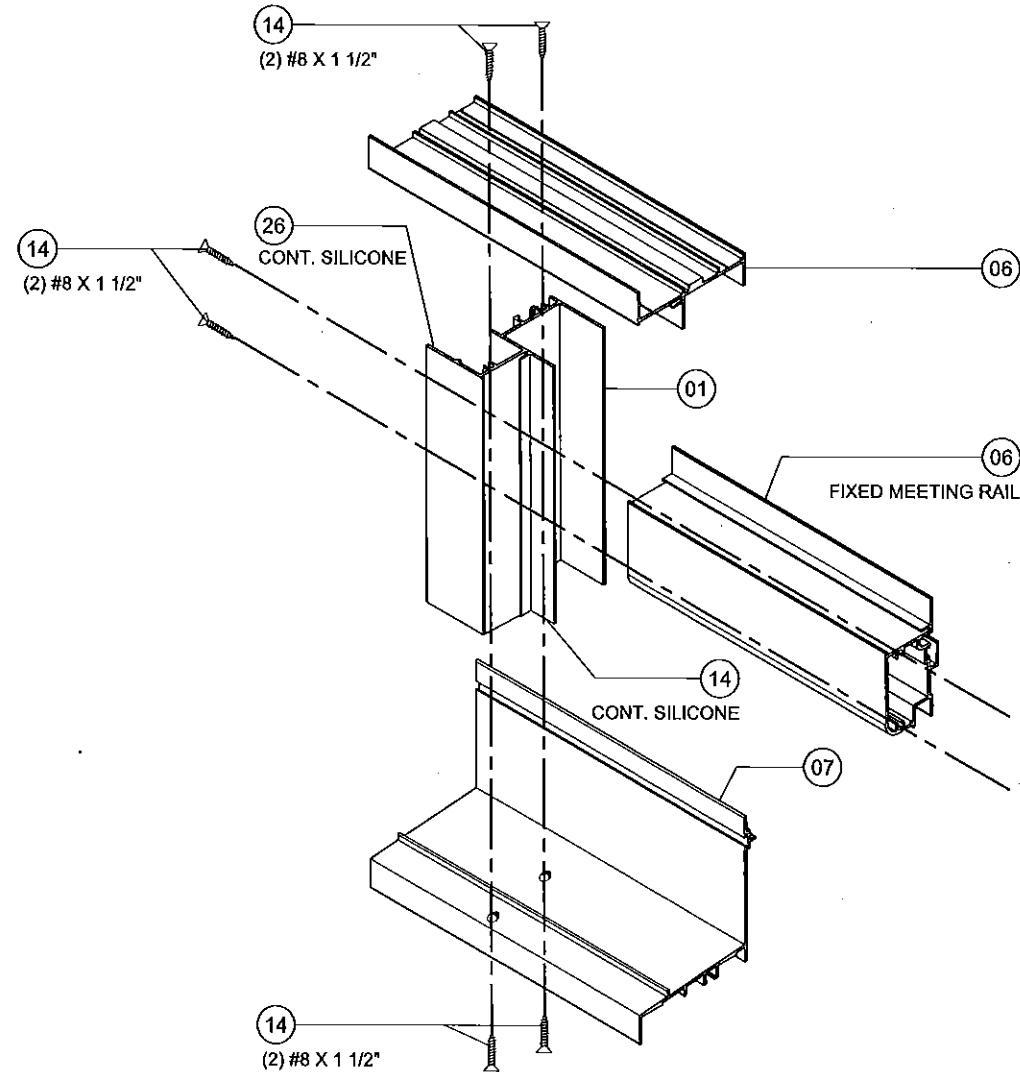
TSH-2750 ALUMINUM SINGLE HUNG WINDOW (LMI)

TITAN GLASS & ALUMINUM, LLC.
450 WEST 27th STREET
HIALEAH, FL 33010
P: (305) 888-0911 F: (305) 671-3840

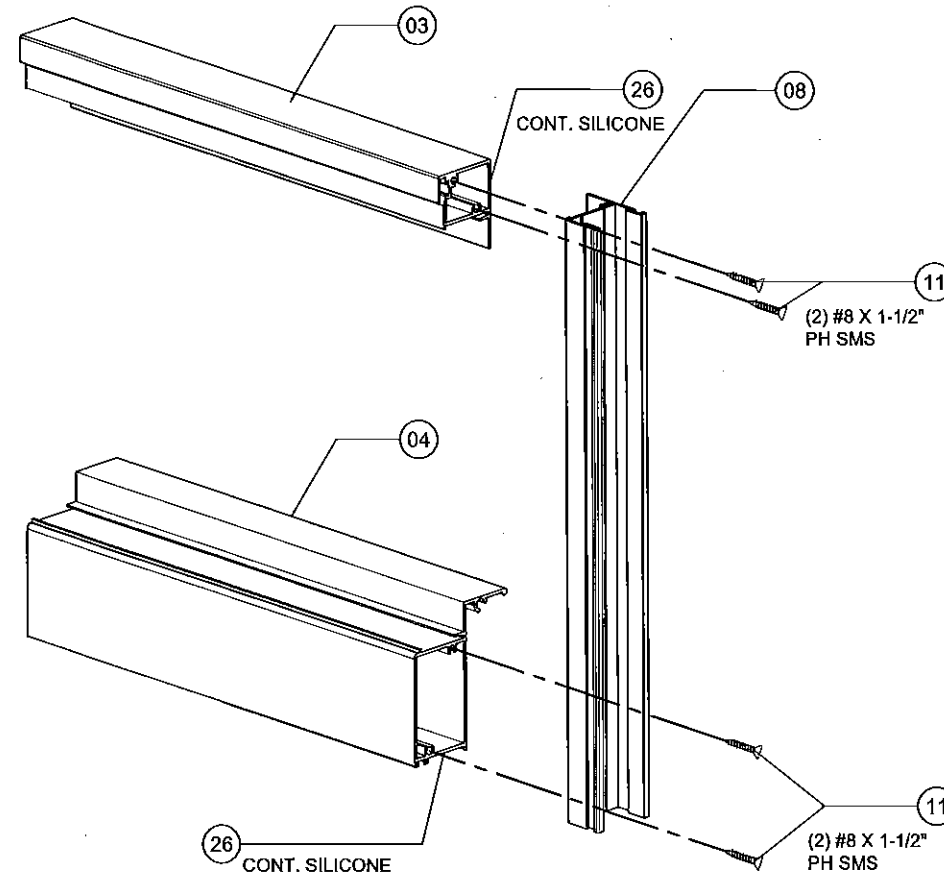
DATE	11/14/12
SCALE	AS SHOWN
DRAWN	W.L.
PROJECT	10-012

DRAWING NO.
AD10-05

5 OF 6

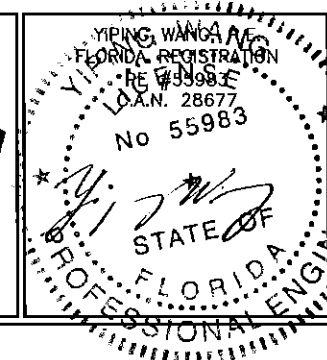


CORNER CONNECTION
AT FRAME HEAD AND SILL
SCALE 4"=1'-0"



CORNER CONNECTION
AT OPERABLE VENT (X)
SCALE 4"=1'-0"

PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No. 14-0515-07
Expiration Date June 23, 2019
By *Manuel Perez*
Miami Dade Product Control
MIAMI DADE COUNTY



MAY 01 2014

TSH-2750 ALUMINUM SINGLE HUNG WINDOW (LMI)
TITAN GLASS & ALUMINUM, LLC.
450 WEST 27th STREET
HIALEAH, FL 33010
P: (305) 888 - 0911 F: (305) 671 - 3840

DATE	11/14/12
SCALE	AS SHOWN
DRAWN	W.L.
PROJECT	10-012
DRAWING NO.	AD10-05
	6 OF 6

NO.	DATE	DESCRIPTION
1	3/15/12	UPDATE TO 2010 FBC
2	5/1/14	UPDATE TO 2014 FBC

MCY
MCY ENGINEERING, INC.
GLAZING CONSULTANTS
8501 SW 124 AVE. STE. 205A P: 305.271.0117
MIAMI, FL 33183 F: 305.921.4786
www.MCYEngineering.com MCY.Engineering@Att.net